

21 January 1957

SECRET

A101 REVISED SCHEDULE

Encl #1 to
SAPC 12781
COPY 1 OF 3**A. ELECTRONIC SYSTEM NO. 1 REQUIREMENTS:****1. Pre-production Phase:**

- a. Research and Development - Design, engineering, construction, laboratory test and operational test of electronic System No. 1.
- b. Research and Development - Transistorized version of information amplifier and power supply.

2. Production Phase - Equipment Requirement No. 1:

- a. Twenty (20) pairs of S-band antennas (includes four (4) spare pairs in FAK and Depot Spares, and one (1) pair for training).
- b. Seventeen (17) pairs X-band antennas (includes four (4) spare pairs in FAK and Depot Spares, and one (1) pair for training).
- c. Thirty-six (36) airborne recorders (includes five (5) spares in FAK and Depot spares, and two (2) for training).
- d. Thirty-seven (37) pairs information amplifiers (includes eight (8) spare pairs in FAK and Depot Spares, and two (2) pairs for training).
- e. Forty-five (45) power supplies (includes sixteen (16) spares in FAK and Depot spares, and two (2) for training).
- f. Eight (8) test sets for System No. 1 (includes six (6) as set forth and funded in SLOE listing, Section H. 1. a. (3)).
- g. Four (4) ground transcription equipment systems (one (1) each Ampex Model 350 - 3 P Recorder and Ampex Model 350-3 recorder assembly with 3-track playback per system).

DOCUMENT NO.

NO CHANGE IN CLASS.

☐ DECLASSIFIED

CLASS. CHANGED TO: TS S C

NEXT REVIEW DATE:

AUTH: HR 10-2

DATE: 22 DEC 1981

REVIEWER: 064540

SECRET

"This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18 U.S.C., Section 793 and 794, the transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law."

~~SECRET~~

21 January 1957

- h. Twenty-three (23) sets of cabling (includes four (4) spare sets in FAK, Depot spares and two (2) for training).
 - i. One-hundred and fifty (150) instruction handbooks for System No. 1 (as set forth and funded with pre-production phase, Section A. 1. a.).
 - j. Spares for System No. 1 (as set forth and funded in FAK and Depot spares listings, Section H. 1. a. (1) and (2).
3. Production Phase - Equipment Requirement No. 2:
- a. Three (3) pairs of S-band antennas
 - b. Three (3) pairs of X-band antennas
 - c. Seventy-one (71) recorders.
 - d. Fifty-four (54) pairs of information amplifiers.
 - e. Forty-five (45) power supplies.
 - f. Four (4) test sets.
 - g. Twenty-one (21) sets of cabling.
 - h. Instruction Handbooks. (Requirement will be fulfilled by some part of those set forth and funded under A. 1. a. above).
 - i. Spares requirement exists (see Section H. 1. b.).
4. Production Phase - Equipment Requirement No. 3:
- a. Twenty (20) pairs of S-band antennas.
 - b. Twenty (20) pairs of X-band antennas.
 - c. Twenty-six (26) airborne recorders (includes five (5) spares.
 - d. Twenty-five (25) pairs transistorized information amplifiers (includes five (5) spare pairs.

~~SECRET~~

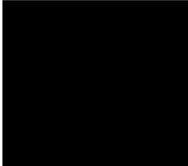
~~SECRET~~

21 January 1957

- e. Twenty-five (25) transistorized power supplies (includes five (5) spares.
- f. Twenty-five (25) sets of cabling (includes five (5) spare sets).
- g. Five (5) test sets for System No. 1.
- h. Five (5) sets air cooling modification equipment for System No. 1 Test Sets.
- i. Fifty (50) reproduced copies of instruction handbook for System No. 1 and one (1) reproducible copy.
- j. Fifty (50) reproduced copies of supplement to instruction handbook for System No. 1 and one (1) reproducible copy.
- k. Five (5) reproduced sets and one (1) reproducible set of drawings.
- l. Spares for System No. 1 (as set forth and funded in FAK and Depot Spares listings, Section H. 1. c. (1) and (2).

ESTIMATED COSTS:

25X1A

A. 1. - - - - -	\$	
A. 2. - - - - -		
A. 3. - - - - -		
A. 4. - - - - -		

~~SECRET~~

SECRET

21 January 1957

B. ELECTRONIC SYSTEM NO. 2 REQUIREMENTS:**1. Pre-production Phase:**

- a. Preliminary Study: - An engineering study directed toward the development of electronic System No. 2.
- b. Research and Development - System No. 2: - Design, engineering, construction, laboratory test, and operational test of a production prototype of electronic System No. 2 (including the construction of a second prototype system for operating personnel training purposes), and engineering preparations for production.
- c. Research and Development - Test Sets: Design, engineering and development of special test equipment for electronic System No. 2 air and ground units.
- d. Research and Development - Test Chassis, Jigs, etc: - Design, engineering and development of test chassis, jigs, etc. for electronic System No. 2.
- e. Weight Reduction Study: - A weight reduction study designed to ascertain design and engineering changes necessary in System No. 2 to bring the units closer to original design weight.
- f. Research and Development - Simulators: - Design, engineering, and development of pilot training equipment for electronic System No. 2.
- g. Research and Development - Range Printer Kit for ground system
- h. Research and Development - Channel-Stepping Unit for airborne system.
- i. Research and Development - Air-Cooling Modification for airborne units.
- j. Research and Development - Four (4) Ground-Operation Kits for adaptation of airborne System 2 units for ground operation.
- k. Research and Development - Monitor Speaker Kit for ground-based receiving equipment.

SECRET

SECRET2. Production Phase - Equipment Requirement No. 2:

- a. Seventeen (17) airborne units (including one (1) unit set forth and funded in Pre-production Phase, Section B. 1. b. as second prototype, and four (4) spare units funded with Production Phase).
- b. Eight (8) ground units (including one (1) unit set forth and funded in Pre-production Phase, Section B. 1. b. as second prototype).
- c. Two (2) receiver sides of Ground Units to be used as guard sets.
- d. Two (2) sets of test and maintenance instruments for preflight testing of airborne units and system including the preflight test set (List N).
- e. Two (2) sets of test and maintenance instruments for ground units at base station transmitting sites (List G).
- f. Two (2) sets of test and maintenance instruments for ground units at base station receiving sites including the receiving equipment test set (List H).
- g. Twenty-five (25) copies of airborne equipment instruction handbooks, and twenty (20) copies of ground-based equipment instruction handbooks.
- h. Spares for System No. 2 (as set forth and funded in FAK and Depot Spares listings, Section H. 2. a. (1).
- i. Crystals for System No. 2 airborne and ground units.
- j. One (1) Simulator (Pilot Training Equipment).
- k. Eight (8) Range Printer Kits.
- l. Seventeen (17) Channel-Stepping Units.
- m. Seventeen (17) sets Air Cooling Modification equipment for airborne units.
- n. Four (4) Ground Operation Kits.

SECRET

SECRET

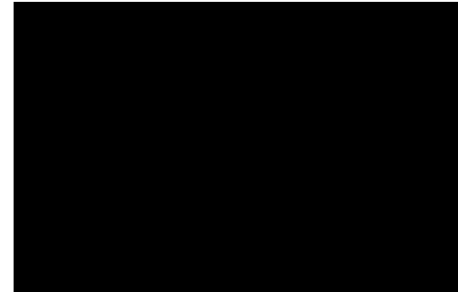
o. Ten (10) Monitor Speaker Kits.

p. Eight (8) Propagation Display Units.

ESTIMATED COSTS:

25X1A

B. 1. - - - - -
B. 2. - - - - -



A4

B3 — — \$19,322
502.

SECRET

SECRET

21 January 1957

C. ELECTRONIC SYSTEM NO. 3 REQUIREMENTS:**1. Pre-production Phase:**

- a. Preliminary Study: - An engineering study directed toward the development of electronic System No. 3.
- b. Research and Development - System No. 3: - Design, engineering, construction, laboratory test, and operational test of a production prototype of electronic System No. 3.
- c. Research and Development - Test Set: - Design, engineering, development, construction, and laboratory test of a production prototype of a test set for System No. 3.
- d. Research and Development - System No. 3A: - Design and development of a modification of System No. 3.

2. Production Phase - Equipment Requirement No. 1:

- a. ¹⁴~~Eleven (11)~~ electronic Systems No. 3, less airborne recorders and cabling, but including junction boxes.
- b. ¹⁴~~Eleven (11)~~ System No. 3A conversion kits.
- c. Fifteen (15) sets cabling for electronic System No. 3, including cables for airborne recorders (includes three (3) spare sets cabling funded with production phase).
- d. Five (5) test sets for electronic System No. 3. (includes one (1) set included and funded as production prototype in section C. 1. c. above).
- e. Twenty-five (25) instruction handbooks.
- f. Spares for System No. 3 and Test Set (as set forth and funded in FAK and Depot Spares listings, Section H. 3. a. (1) and (2)).

3. Production Phase - Equipment Requirement No. 2:

- a. Four (4) electronic Systems No. 3 less airborne recorders and cabling, but including junction boxes.
- b. Four (4) System No. 3A conversion kits.

SECRET

SECRET

21 January 1957

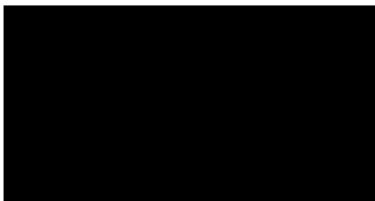
- c. Spares requirement exists (see Section H. 3. b. (1) and (2).

4. Production Phase - Equipment Requirement No. 3:

- a. Twenty-five (25) electronic Systems No. 3, less airborne recorders, but including junction boxes and cabling (includes five (5) spare systems).
- b. Twenty-five (25) airborne recorders (includes five (5) spare recorders).
- c. Twenty-five (25) System No. 3A conversion kits (includes five (5) spare kits).
- d. Five (5) test sets for electronic System No. 3.
- e. Fifty (50) instruction handbooks.
- f. Five (5) reproduced sets and one (1) reproducible set of drawings.
- g. Spares for System No. 3 (as set forth and funded in FAK and Depot Spares listings, Section H. 3. c. (1) and (2).

ESTIMATED COSTS:

25X1A

C. 1.	- - - - -	\$	
C. 2.	- - - - -		
C. 3.	- - - - -		
C. 4.	- - - - -		

SECRET

SECRET

21 January 1957

D. ELECTRONIC SYSTEM NO. 4 REQUIREMENTS:**1. Pre-Production Phase:**

- a. Preliminary Study: - An engineering study directed toward the development of electronic System No. 4.
- b. Research and Development - System No. 4: - Design, engineering, construction, laboratory test and operational test of a production prototype of electronic System No. 4 and associated antennas.
- c. Research and Development - Test Set: - Design, engineering and development of test set for electronic System No. 4.
- d. Research and Development - System No. 5: - Design, and construction of a prototype of a modified version of System No. 4.

2. Production Phase - Equipment Requirement No. 1:

- a. ~~Four~~ ^{Five} (5) electronic Systems No. 4 (including one (1) prototype system set forth and funded in pre-production phase, Section D. 1. b.). (Contractor to submit estimates of production costs when known).
- b. Three (3) test sets four electronic System No. 4 (including one prototype set forth and funded in pre-production phase, Section D. 1. c.) (Contractor to submit estimates of production costs when known).
- c. Spares requirement exists (see Section H. 4. a. (1) and (2)).

3. Production Phase - Equipment Requirement No. 3:

- a. ~~Five~~ ^{Six} (6) electronic Systems No. 4 (Contractor to submit estimates of production costs when known).
- b. Two (2) test sets for electronic System No. 4 (Contractor to submit estimates of production costs when known).
- c. Spares requirement exists (see Section H. 4. b. (1) and (2)).

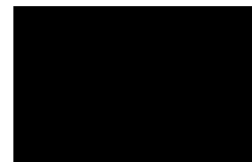
SECRET

SECRET

ESTIMATED COSTS:

25X1A

D. 1. - - - - -
D. 2. - - - - -
D. 3. - - - - -



SECRET

SECRETE. GROUND DUPING AND ANALYSIS - ELECTRONIC SYSTEMS NO. 1 AND 31. Pre-production Phase:

- a. Research and Development - Three-Channel Data Reduction System: - Design, engineering, construction and laboratory and operational tests of a three-channel data reduction system suitable for use with electronic Systems No. 1 and 3.
- b. Prototype Production - Three-Channel Data Reduction System: - Production of two (2) deliverable prototype units of all items of the three-channel data reduction system, except three (3) units of analysis playback equipments.
- c. Research and Development - Analysis Playback Equipment Modification Kit: - Design, engineering, and construction of a modification kit for the analysis playback equipment to provide speed variability.

2. Production Phase - Equipment Requirement No. 1:

- a. Six (6) playback and time-mark counter equipments (A rack) (includes two (2) items set forth and funded in Section E.1. b. above).
- b. Six (6) duplicating equipments (B₁ rack) (including two (2) items set forth and funded in Section E.1. b. above).
- c. Six (6) duplicating equipments (B₂ rack) (including two (2) items set forth and funded in Section E. 1. b. above).
- d. Five (5) analysis playback equipments (C rack) (including three (3) items set forth and funded in Section E. 1. b. above).
- e. Eight (8) PRF indicator equipments (D rack) (includes two (2) items set forth and funded in Section E. 1. b. above).
- f. Eight (8) frequency indicator equipments (E rack) (includes two (2) items set forth and funded in Section E. 1. b. above).

SECRET

SECRET

21 January 1957

- g. Five (5) event-marker equipments (F rack) (includes two (2) items set forth and funded in Section E. 1. b. above).
- h. Technical manuals for each equipment item comprising the system, and for the system as a whole, in following quantities (as set forth and funded under pre-production phase, Section E. 1. a. above):

A Rack - 15	D Rack - 40
B Rack - 15	E Rack - 25
C Rack - 25	F Rack - 40
System - 25	
- i. Spares requirement exists (see H. 5. a. (1) and (2)).
- j. Twelve (~~24~~) modification kits for Ampex tape transports.
- k. Five (5) modification kits for analysis playback equipment to provide speed variability.
- l. Three (3) modification kits for event-marker equipment to provide two moving styli and compatibility with fourteen-channel data reduction equipment.
- m. Thirty-eight (38) patch cables.

3. Production Phase - Equipment Requirement No. 3:

- a. Four (4) playback and time-mark counter equipments (A rack).
- b. Four (4) duplicating equipments (B₁ rack).
- c. Four (4) duplicating equipments (B₂ rack).
- d. Nine (9) analysis playback equipments (C rack).
- e. Seven (7) PRF indicator equipments (D rack)
- f. Nine (9) frequency indicator equipments (E rack).
- g. Eleven (11) event-marker equipments (F rack).
- h. Ten (10) reproduced copies and one (1) reproducible copy of each of nine (9) manuals for the individual racks and the system as a whole.

SECRET

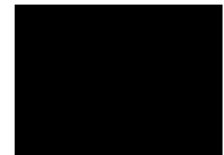
SECRET

- i. Three (3) reproduced sets and one (1) reproducible set of drawings.
- j. Spares requirement exists (see H. 5. b. (1)).
- k. Eleven (11) modification kits for analysis playback equipment to provide speed variability.
- l. Eleven (11) modification kits for event-marker equipment to provide compatibility with fourteen-channel data reduction equipment and two (2) moving stylii.
- m. Forty-four (44) patch cables.

ESTIMATED COSTS:

25X1A

E. 1.	- - - - -	\$	
E. 2.	- - - - -		
E. 3.	- - - - -		



SECRET

SECRET

1. Pre-production Phase:

- a. Research and Development - Fourteen-Channel Data Reduction System: - Design, engineering, construction and laboratory and operational test of a fourteen-channel data reduction system suitable for use with electronic System No. 4.
- b. Prototype Production: - Production of one (1) deliverable prototype unit of (i) the fourteen-channel playback equipment rack, (ii) the fourteen-channel duplicating equipment rack, (iii) the power supply equipment rack, and (IV) the timing control equipment rack.

- a. Six (6) units of fourteen-channel playback equipment (Rack G). (Includes one (1) deliverable unit funded under F. l. b. above.)
- b. Six (6) units of the fourteen-channel duplicating equipment (Rack H). (Includes one (1) deliverable unit funded under F. l. b. above.)
- c. Six (6) units of power supply equipment for fourteen-channel system (Rack J). (Includes one (1) deliverable unit funded under F. l. b. above.)
- d. Six (6) units of timing control equipment for fourteen-channel system (Rack K). (Includes one (1) deliverable unit funded under F. l. b. above.)
- e. Fifteen (15) copies each of five (5) technical manuals for the individual racks and the system as a whole (as set forth and funded under Section F. l. a. above).
- f. Spares requirement exists (see Section H. 6. a. and b.).

25X1A

F.1. - - - - -

Fig. 2. - - - - -

SECRET

SECRET

21 January 1957

G. TRAINING OF GOVERNMENT PERSONNEL:**1. Requirement No. 1:**

- a. Informal training sessions for one person, designated by the Government, from approximately 1 August 1955 to 10 August 1955, and for one person, designated by the Government, from 1 August 1955 to 12 September 1955, in the theory, structure, operation, installation, and maintenance of electronics System No. 1.
- b. Formal training sessions for twelve persons designated by the Government from approximately 3 October 1955 to 7 November 1955 (five (5) weeks) in the theory, structure, operation, installation and maintenance of electronic System No. 1 and ARN-6 Radio Compass.

2. Requirement No. 2:


- a. Formal training sessions for five persons, designated by the Government, from approximately 9 January 1956 to 3 February 1956 in the theory, structure, operation, installation and maintenance of electronic System No. 1.
- b. Formal training sessions for twenty-one persons, designated by the Government, from approximately 12 January 1956 to 24 February 1956 in the theory, structure, operation, installation and maintenance of electronic System No. 2.

3. Requirement No. 3:

- a. Formal training sessions for approximately eighteen (18) persons, designated by the government, for a period of approximately ten (10) weeks beginning about October 15, 1956.

ESTIMATED COSTS:

25X1A

G. 1. - - - - -	\$	
G. 2. - - - - -		
G. 3. - - - - -		

SECRET

SECRET

21 January 1957

H. SUPPORT REQUIREMENTS - FAK, DEPOT SPARES, AND SLOE**1. Electronic System No. 1:****a. Support Requirement No. 1:**

- (1) Fly-Away Kits: - Three (3) portable Fly-Away Kits (FAK) each providing one set of parts, components and sub-assemblies necessary for the maintenance of five operational systems at a main or advanced base for a 30-day period.
- (2) Depot Spares: - Spare parts and assemblies for maintenance of Fly-Away Kits for a 180-day period.
- (3) Special List of Equipment: - Three (3) sets of Special List of Equipment (SLOE) formerly called Unit Essential Equipment (UEE), for main base support of Electronic System No. 1.

b. Support Requirement No. 2:

- (1) Basic requirement exists, but quantities and composition of support list not yet formalized. Contractor's recommendations are to be submitted when known. Estimate \$40,000.

c. Support Requirement No. 3:

- (1) Fly-Away Kits: - One (1) portable Fly-Away Kit (FAK) providing one set of parts, components and sub-assemblies necessary for the maintenance of twenty (20) operational systems at a main or advanced base for a 30-day period.
- (2) Depot Spares: - Spare parts and assemblies for maintenance of the Fly-Away Kit for a 360-day period.
- (3) Special List of Equipment: - One (1) set of Special List of Equipment (SLOE) for main base support of Electronic System No. 1.

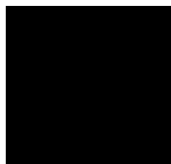
SECRET

~~SECRET~~

21 January 1957

ESTIMATED COSTS:

25X1A

H. 1. a. - - - - - \$ 

H. 1. b. - - - - -

H. 1. c. - - - - -


2. Electronic System No. 2:

a. Support Requirement No. 2:

- (1) Fly-Away Kits and Depot Spares: - Basic requirement exists and will include all remaining parts after quantity cut back; quantities and composition of FAK for electronic System No. 2 not yet formalized.
- (2) Special Lists of Equipment: - Consisting of the following lists of special test equipment set forth and funded under electronic System No. 2, Section B.2.d.e. and f. above).
 - (a) Two (2) sets of test and maintenance instruments for preflight test of airborne units and System including preflight test set (List N).
 - (b) Two (2) sets of test and maintenance instruments for ground units at base station transmitting sites (List G).
 - (c) Two (2) sets of test and maintenance instruments for ground units at base station receiving sites including the receiving test set (List H).

ESTIMATED COSTS:

25X1A

H. 2. a. - - - - - \$ 3. Electronic System No. 3:

a. Support Requirement No. 1:

- (1) Fly-Away Kits: - Three (3) portable Fly-Away Kits (FAK) each providing one set of parts,

~~SECRET~~

SECRET

21 January 1957

- (3) Special List of Equipment: - Basic requirement fulfilled with delivery of SLOE for electronic system No. 1 (set forth and funded in item H. 1. c. (3) above). Five (5) test sets, specific to electronic System No. 3 (set forth and funded in item C. 4. c. above) are included in this listing. Contractor's recommendations for any additional equipment specific to electronic System No. 3 to be submitted when known.

ESTIMATED COSTS:

25X1A

H. 3. a. - - - - -	\$	
H. 3. b. - - - - -		
H. 3. c. - - - - -		

4. Electronic System No. 4:

a. Support Requirement No. 1:

- (1) Fly-Away Kit: - Basic requirement exists but quantities and composition of FAK for electronic System No. 4 not yet formalized. Contractor's recommendations are to be submitted when known.
- (2) Depot Spares: - Basic requirement exists but quantities and composition of 180-day support list not yet formalized. Contractor's recommendations are to be submitted when known.
- (3) Special List of Equipment: - Basic requirement exists but quantities and composition of SLOE not yet formalized. Contractor's recommendations are to be submitted when known.

b. Support Requirement No. 3:

- (1) Fly-Away Kit: - Basic requirement exists but quantities and composition of FAK for electronic System No. 4 not yet formalized. Contractor's recommendations are to be submitted when known.
- (2) Depot Spares: - Basic requirements exists but quantities and composition of 360-day support list

SECRET

~~SECRET~~

21 January 1957

not yet formalized. Contractor's recommendations are to be submitted when known.

- (3) Special List of Equipment: - Basic requirement exists but quantities and composition of SLOE not yet formalized. Contractor's recommendations are to be submitted when known.

25X1A

ESTIMATED COSTS:

H. 4. a. - - - - - \$

H. 4. b. - - - - -

5. Three-Channel Data Reduction Equipment for Systems 1 & 3a. Support Requirement No. 1:

- (1) Fly-Away Kits: - Portable fly-away kits (FAK) each providing one set of parts, components, and sub-assemblies necessary for the maintenance of each rack of data reduction equipment in the following quantities:

(a)	A Rack	6
(b)	B ₁ & B ₂ Racks	6
(c)	C Rack	5
(d)	D Rack	8
(e)	E Rack	8
(f)	F Rack	5

- (2) Depot Spares: - Basic requirement exists; partially fulfilled by contractor's proposal covering A, B, C, and F racks. Quantities and composition of support list for D and E racks not yet formalized. Contractor's recommendations are to be submitted when known.

b. Support Requirement No. 3:

- (1) Fly-Away Kits: - Portable fly-away kits (FAK) each providing one set of parts, components, and sub-assemblies necessary for the maintenance of each rack of data reduction equipment in the following quantities:

~~SECRET~~

SECRET


21 January 1957

(a)	A Rack	4
(b)	B ₁ & B ₂ Racks	4
(c)	C Rack	9
(d)	D Rack	7
(e)	E Rack	9
(f)	F Rack	11

- (2) Depot Spares: - Basic requirement exists; partial fulfilled by Contractor's proposal covering A, B, C, and F racks. Quantities and composition of support list for D and E racks not yet formalized. Contractor's recommendations are to be submitted when known.

ESTIMATED COSTS:

25X1A

H. 5. a. - - - - - \$ 

H. 5. b. - - - - -

6. Fourteen-Channel Data Reduction Equipment

a. Support Requirement No. 1:

Basic requirement exists but quantities and composition of spares not yet formalized. Contractor's recommendations are to be submitted when known.

b. Support Requirement No. 3:

Basic requirement exists but quantities and composition of spares not yet formalized. Contractor's recommendations are to be submitted when known. 25X1A

ESTIMATED COSTS:

H. 6. a. - - - - - \$ 

H. 6. b. - - - - -

SECRET

I. SUPPORT REQUIREMENTS - TEST SITES:

1. Government's Test Site:

- a. Electronic System No. 1: Provisioning equipment consisting of furniture and equipment required for testing of electronic system no. 1, as set forth in "List of Equipment for System No. 1."
- b. Electronic System No. 2: Provisioning equipment consisting of equipment required for testing electronic system no. 3, as set forth in "List of Additional Equipment Required for System 3."
- c. All Systems: Provisioning equipment consisting of equipment required for testing electronic systems under the contract as set forth in "Additional Field Support Equipment Requirements."

2. Contractor's Test Site:

- a. Electronic System No. 2: Labor, materials, drayage and fees required to erect structures and antennas, to lay power lines and install phones, to provide auxiliary road and parking area, to install technical equipment and administrative equipment and to test operationally electronic system no. 2.

ESTIMATED COSTS:

25X1A


I. 1. - - - - - \$

I. 2. - - - - -



SECRETJ. FLIGHT TESTING:

1. Electronic System No. 1: Flight test of electronic system no. 1, as required by the Government, utilizing aircraft made available by the Government for this purpose.
2. Electronic System No. 2: Flight test of electronic system no. 2, as required by the Government, utilizing aircraft made available by the Government for this purpose.
3. Electronic System No. 3: Flight test of electronic system no. 3, as required by the Government, utilizing aircraft made available by the Government for this purpose.
4. Electronic System No. 4: Flight test of electronic system no. 4 as required by the Government, utilizing aircraft made available by the Government for this purpose. 25X1A

ESTIMATED COST: - - - - - \$ **SECRET**

SECRET**K. EQUIPMENT REDESIGN, MODIFICATIONS, RETROFIT AND REPAIRS:**

1. Redesign: - At the request of the Government, the Contractor shall undertake redesign of the electronic systems, or associated equipments and gear or components thereof, to achieve better performance, more reliable performance, lighter weight or other advantages of interest to the Government. Contractor shall recommend to the Government any redesign which will improve performance or reliability or decrease weight or offers other advantages.
2. Modifications: - At the request of the Government, the Contractor shall make such modifications of the electronic systems or associated equipments and gear, or components thereof, as bench or other tests indicate to be necessary to achieve better or more reliable performance. Contractor shall recommend to the Government any modifications required which improve performance or reliability or offer other advantages.
 - (a) Research and Development - Modification of System 1 and 3 airborne recorder unit to improve operational performance.
 - (b) Research and Development - Modification of System 1 test set to correct excessive internal heating.
 - (c) Research and Development - Study and modification of System 1 and 3 airborne recorder unit to improve reel tape wrap.
 - (d) Research, Development, and Production - Study, modify, and test twenty (20) special preamplifiers furnished by the Government for use with System 1.
 - (e) Technical Writing - Make necessary changes and modifications to System 1 instruction manuals as are required by changes and modifications to the equipment.
- c. Retrofit: - As a result of redesign or modifications approved by the Government, and where feasible and appropriate, the Contractor shall retrofit, or deliver to the Government for retrofit, necessary components, parts, assemblies, etc., necessary to improve performance or reliability of the various systems or equipments being delivered hereunder.

SECRET

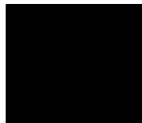
SECRET

- (a) A retrofit of System 1 and 3 airborne recorder unit to effect modification for improved operational performance.
- (b) Retrofit of System 1 test set to correct excessive internal heat.

4. Repairs: - Contractor shall repair any systems or components thereof or any other equipments delivered hereunder which are damaged in tests or use or require periodic overhaul, pending the negotiation of a separate contractual arrangement for periodic and necessary factory overhaul of systems and equipments delivered hereunder. Contractor shall procure and store a stock of parts to be used in repair and retrofit of systems under the contract.

ESTIMATED COSTS:

25X1A

K. 2.	- - - - -	\$	
K. 3.	- - - - -		
K. 4.	- - - - -		

SECRET

SECRET

21 January 1957

L. OTHER SERVICES:

1. Consultants: As required by the Government, and as otherwise necessary and desirable. Contractor to submit cost estimates.
2. Technical Representatives: As required by the Government to perform or assist Government personnel in performing installations, tests, operations, maintenance, repairs, and similar and related duties at places designated by the Government. Services contemplated hereunder are considered to be temporary or intermittent in nature and directly related to production and test of systems and requirements being delivered hereunder. Contractor to submit cost estimates.
3. Contract Personnel: As required by the Government on a longer range basis, consisting of trained technicians to assist in maintenance and operation of the systems and equipments, pending the negotiation of a separate contractual arrangement for such services. Contractor requested to submit cost estimates.
4. Parts Listing and Spares Recommendations: As required by the Government, the Contractor will prepare and maintain certain parts list information furnishing copies to the Government as requested. Contractor will perform necessary engineering to make recommendations for spare parts provisioning for the various systems under the contract as requested by the Government. Contractor to submit cost estimates.

ESTIMATED COSTS:

25X1A

L. 1.	- - - - -	\$	
L. 2.	- - - - -		
L. 4.	- - - - -		

SECRET

SECRET

21 January 1957

M. SUBCONTRACTING:

1. As required and/or approved by the Contracting Officer.

N. MATERIEL:

1. Magnetic tape, as required by the Government:

- a. Requirement No. 1


Three-hundred sixty (360) reels of 1/4" 1/2 mil mylar
Spec 112 operating tape. Five-hundred thirty-eight (538)
reels of 1/4" 1 mil mylar MM150-A-36 RPS dupli-
cating tape.

- b. Requirement No. 2

Two-hundred thirty (230) reels of 1/4" 1/2 mil mylar
Spec 112 operating tape.

ESTIMATED COST:

25X1A

N. 1. a. - - - - - \$ 
N. 1. b. - - - - -

(Estimated costs set forth for items A through N, above, or for sub-
divisions of such items, are for budgetary and allocation purposes
only. Any and all funds obligated under this contract are available
for expenditure for any portion of the work under this contract).

SECRET